

REMARKS

In the Office Action dated May 20, 2008, claims 22-25, 30, 32, and 34 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,628,023 (Bryant); claims 1, 2, 4, 7-9 and 11-15 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication No. 2002/0124148 (Beukema) in view of U.S. Patent No. 5,991,778 (Starek); claims 1, 9, 10, 29, and 41 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bryant in view of Starek; claims 16-20, 26-28, 36, 39, 43, 44, and 45 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,976,163 (Hind) in view of Bryant; claim 42 is rejected under 35 U.S.C. § 103(a) as unpatentable over Hind in view of Bryant and Starek; and claims 1 and 3-6 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 7,194,092 (England) in view of Starek.

REJECTION UNDER 35 U.S.C. § 102

Independent claim 22 was rejected as purportedly being anticipated by Bryant. Claim 22 has been amended to recite that rendering the memory protection key in the memory write command inaccessible **by overwriting at least a portion of the memory protection key upon completion of the memory write command.** As conceded on page 8 of the Office Action, Bryant does not disclose this feature that has been added to claim 22. Therefore, claim 22 is not anticipated by Bryant. However, against other claims, the Office Action argued that another reference, Starek, “disclosing it is well known in the art to securely delete sensitive information by overwriting data. (Col. 1:40-53).” 5/20/2008 Office Action at 8. However, it is respectfully submitted that no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Bryant and Starek. Bryant describes a user program storing a token in a register and subsequently issuing a special instruction to modify information stored in a protected page, where the special instruction retrieves the token from the register and provides the token to hardware. Bryant, 19:41-50. Bryant also notes that this token retrieved from the register is matched with a token assigned to a protected page. *Id.*, 19:60-65. If the tokens match, then the user program can access and update the memory location; however, if the tokens do not match, then a protection verification exception is issued. *Id.*, 19:64-20:6.

There is no indication provided in Bryant of any desirability to make the token provided with the special instruction inaccessible. Thus, a person of ordinary skill in the art would not have been prompted to incorporate the teachings of Starek into the mechanism described in Bryant.

Moreover, Starek refers to enhancing file system calls by performing secure file deletion on the storage device. Starek, 3:9-24. The secure deletion of data accessed by a file system call, as taught by Starek, is unrelated to the issue of deleting a memory protection key, as recited in claim 1. Therefore, a person of ordinary skill in the art would not have been prompted to apply the teachings of Starek to the teachings of Bryant to achieve the claimed subject matter.

In view of the foregoing, it is respectfully submitted that claim 22 would also be non-obvious over Bryant and Starek.

REJECTION UNDER 35 U.S.C. § 103 OVER BRYANT IN VIEW OF STAREK

Independent claim 1 was rejected as purportedly being obvious over Bryant in view of Starek. For reasons similar to those stated above with respect to amended claim 22, it is respectfully submitted that claim 1 is also non-obvious over Bryant and Starek, since a person of ordinary skill in the art would not have been prompted to combine the reference teachings to provide at least the following element of claim 1 (in combination with the other elements of claim 1): then render the memory protection key in the memory command inaccessible by overwriting at least a portion of the memory protection key.

Therefore, the obviousness rejection of claim 1 and its dependent claims is defective.

REJECTION UNDER 35 U.S.C. § 103 OVER BEUKEMA AND STAREK

Independent claim 1 was also rejected as being obvious over Beukema and Starek. The Office Action conceded that Beukema fails to disclose rendering the memory protection key inaccessible by overwriting at least a portion of the memory protection key. 5/20/2008 Office Action at 6. Instead, the Office Action cited Starek as purportedly disclosing this claim feature. *Id.* at 7.

As Beukema describes accessing a protection/translation table to retrieve a protection key, and to compare the protection key to a protection key received in an access to main memory. Beukema, ¶ [0054]. However, there is no hint in Beukema of any desirability to render this protection key inaccessible by overwriting at least a portion of such protection key. Therefore, a person of ordinary skill in the art would not have been prompted to combine the teachings of Beukema and Starek to achieve the claimed subject matter.

Moreover, as discussed above, Starek relates to enhancing a file system call by performing secure deletion of data accessed by the file system call. This has nothing to do with rendering a protection key inaccessible by overwriting at least a portion of such protection key. This is a further reason that a person of ordinary skill in the art would not have been prompted to combine the teachings of Beukema and Bryant to achieve the claimed subject matter.

Therefore, the obviousness rejection of claim 1 over Beukema and Starek is defective.

REJECTION UNDER 35 U.S.C. § 103 OVER ENGLAND IN VIEW OF STAREK

It is respectfully submitted that claim 1 is also non-obvious over England and Starek. With respect to claim 1, the Office Action conceded that England does not disclose rendering the memory protection key in the memory command inaccessible by overwriting at least a portion of the memory protection key. 5/20/2008 Office Action at 18. However, the Office Action cited Starek as purportedly disclosing this feature of claim 1.

England refers to an application passing a rights manager certificate and application storage key to a digital rights management operating system (DRMOS). The DRMOS validates the key and compares the rights manager certificate against an access predicate. The DRMOS also determines if the application's use of the content is permitted under the license and allows access if it is. England, 10:41-51. However, England does not disclose or hint at rendering a memory protection key inaccessible by overwriting at least a portion of the memory protection key. In fact, there is nothing in England to hint at any desirability of incorporating such a feature. Therefore, a person of ordinary skill in the art would not have been prompted to incorporate the teachings of Starek in England to achieve the claimed subject matter.

Moreover, as discussed above, the teachings of England that relate to enhancing a file system call by performing secure deletion of the data access by the file system call has nothing to do with rendering a memory protection key inaccessible by overwriting at least a portion of such memory protection key.

In view of the fact that no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of England and Starek, the obviousness rejection of claim 1 over England and Starek is defective.

REJECTION UNDER 35 U.S.C. § 103 OVER HIND, BRYANT, AND STAREK

Independent claim 16 has been amended to incorporate the subject matter of former dependent claim 42 (now cancelled). Claim 42 was rejected as being obvious over Hind, Bryant, and Starek.

The Office Action conceded that Hind and Bryant do not disclose rendering a memory protection key in a memory command inaccessible by overwriting at least a portion of the memory protection key. 5/20/2008 Office Action at 16-17. However, the Office Action cited Starek as purportedly disclosing this feature. *Id.* at 17.

For reasons stated above regarding why a person of ordinary skill in the art would not have been prompted to combine the teachings of Bryant and Starek to achieve the claimed subject matter, it is respectfully submitted that no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Hind, Bryant, and Starek. Therefore, the obviousness rejection of the subject matter of claim 16 over Hind, Bryant, and Starek is also defective.

CONCLUSION

In view of the allowability of base claims, it is respectfully submitted that the obviousness rejections of dependent claims have also been overcome.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (NRT.0199US).

Respectfully submitted,

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